

# Commissioner's UPDATE

News from the New Jersey Department of Environmental Protection

September — October 2004



A Message  
from  
Bradley M.  
Campbell,  
Commissioner

Every New Jersey resident has a right to breathe clean air. Yet, at various times during the year, nearly all of us breathe air that is contaminated with hazardous pollutants, which threaten our health, spoil our natural resources and diminish our quality of life.

Increased levels of soot and smog can make breathing difficult, particularly for young children and elderly residents. Asthma rates and other serious respiratory ailments are on the rise. Toxic mercury emissions from coal-fired power plants and other industrial sources have impaired our water resources and made some fish too dangerous to eat.

To safeguard the health and well-being of our families and the quality of our environment, we are implementing strong, new clean-air initiatives, including a no-idling campaign to protect our children from the dangers of diesel exhaust.

We will fight relentlessly to improve New Jersey's air quality because the health of every resident is at stake.

*Bradley M. Campbell*

## Dangerous diesel emissions key target in New Jersey's fight to improve air quality

New Jersey's schoolchildren this year could be breathing healthier air, thanks to a Department of Environmental Protection initiative to reduce harmful emissions from diesel-powered school buses.

DEP Commissioner Bradley M. Campbell launched a statewide campaign to curb diesel exhaust from school buses by asking school districts and school-bus drivers to pledge voluntarily to eliminate school-bus idling while waiting to load and unload students.

The DEP is reaching out to every school district in New Jersey this fall by mailing a no-idling pledge and a fact sheet that explains the adverse health effects of diesel exhaust and how to minimize them.

Diesel exhaust is a likely carcinogen and contains fine particles, commonly known as

soot, which easily reach the deepest parts of the lungs, accumulating over time and obstructing oxygen transfer to the blood. Inhaling soot also worsens asthma, bronchitis and existing allergies and may contribute to decreased lung



### Stopping the soot

Department of Environmental Protection Commissioner Bradley M. Campbell and Sen. Bob Smith (left) kick off the DEP's school-bus no-idling campaign at Piscataway's Grandview Elementary School. The DEP also is providing no-idling street signs (right) to post near school loading zones.



*continued on page 4*

## 'Bucket Brigade' initiative empowers communities to improve air quality

Committed to improving air quality and protecting public health in the City of Camden, the DEP launched an innovative initiative that enables community residents to play a significant role in measuring exposure to airborne pollutants.

As part of the "Bucket Brigade" project in Camden's Waterfront South neighborhood, the DEP educated residents on how to use a five-gallon plastic bucket to collect air samples into a plastic bag. The samples are analyzed for sulfur-containing, odorous substances and volatile organic compounds such as benzene, a known carcinogen.

The project is a community-based component of the DEP's special Air Toxics study being conducted in the Waterfront South neighborhood to learn more about sources of air pollution, such as industrial facilities, manufacturing plants, diesel trucks, buses and cars, and to develop strategies to reduce these harmful emissions. Air toxics are pollutants that are emitted in large enough quantities to have an adverse health effect, but are not regulated by national environmental standards.



*Camden's Bucket Brigade project enables community residents to collect air samples simply by using a plastic bucket.*

The first of its kind in New Jersey, the air toxics study focuses on hazardous airborne pollutants such as ammonia, lead, chromium, cadmium, and particulate emissions from diesel trucks that can cause a host of health problems, including difficulty breathing, learning disabilities and cancer.

Although the DEP has been monitoring Camden's air for some time, detailed information about air toxics and their health effects is limited.

## EPA's weak pollution proposals are bad for New Jersey's air

Armed with one of the nation's most comprehensive approaches to improving air quality, Governor James E. McGreevey is calling on the federal government to follow New Jersey's lead in getting tough on air pollution.

Immediately after the U.S. Environmental Protection Agency in June declared several New Jersey counties failed to meet the new, more protective federal standard for fine particulates, Governor McGreevey criticized the Bush Administration for undermining states' clean-air initiatives by easing restrictions on Midwestern power plants and weakening federal regulations on mercury.

"The EPA has backed away from using the Clean Air Act to force the nation's dirtiest power plants, which contribute one third of New Jersey's air pollution, to install the pollution controls required by the law," Governor

McGreevey said in a statement. "As it abdicates its responsibility to implement the federal law, and puts the interests of these polluters ahead of public health, the EPA instead offers weak proposals that give the states too little help, too late."

The fine particulate problem in New Jersey comes from sources such as diesel-powered engines, which emit particles, and Midwest power plants that emit gases that are converted to particles as they travel downwind to New Jersey. A major contributor of particulates from in-state sources is diesel exhaust from on-road vehicles such as trucks and buses and from off-road equipment such as bulldozers, excavators and loaders.

The Governor's clean-air initiatives include reducing diesel emissions and the most protective mercury regulations in the nation (see related stories on pages 1 and 5).

## DEP launches efforts that zero in on ozone reduction

**W**hen temperatures increase throughout the summer in New Jersey, so do ozone levels. Ground-level ozone forms when pollutants from automobiles and industrial facilities react in the presence of sunlight.

Ozone exposure can irritate the lungs, increase the incidence of asthma, reduce lung function and aggravate chronic lung diseases. Increased ozone and smog concentrations severely affect the quality of life for susceptible populations – small children, the elderly, and asthmatics – and present health risks for everyone.

Under the leadership of Governor James E. McGreevey, New Jersey is taking action to reduce ozone with several significant initiatives.

### Cleaner cars

In January 2004, Governor McGreevey signed legislation that will bring New Jersey the cleanest cars available in the United States. The new law adopts the California Low Emission Vehicle (LEV) 2 program. Cleaner cars in New Jersey will reduce automotive emissions of nitrogen oxide (NOx) and other ozone precursors such as volatile organic compounds (VOCs).

The Clean Cars law requires the DEP to begin implementing the program in 2009. By 2025, automobile emissions of NOx, VOCs and air toxics are projected to be about 20 percent lower than they would have been without the LEV 2 program. To achieve these reductions, the law requires carmakers to produce approximately 40,000 gas-electric hybrid cars and 128,000 super-clean gasoline cars for sale in New Jersey beginning in 2009. For manufacturers that are already working toward these goals, the DEP will provide credits for cars sold between 1999 and 2009.

### Cleaner machinery

In May, Governor James E. McGreevey, the Port Authority and the U.S. Army Corps of Engineers launched a multibillion-dollar project to deepen channels in the Port of New York and New Jersey to accommodate the newest, largest cargo vessels. The machinery necessary to implement this project will generate approximately 3,000 tons of NOx.

To mitigate the effects of these harmful emissions, the project includes plans to reduce emissions of NOx else-

where, including the repowering of tugboats with cleaner engines and the retrofitting of the Staten Island Ferry fleet with selective catalytic reduction technology. Two of the repowered tugboats are already working in the harbor. Not only will this agreement generate no-net gain of NOx during the harbor deepening project, it will also create long-term reductions in NOx emissions, as the cleaner ferry and tugboat fleets continue to operate.

### Model rules adopted

The DEP has adopted model Ozone Transport Commission (OTC) rules to control the emissions of VOCs and toxics from consumer products and establish requirements that apply to manufacturers, distributors, suppliers and retailers. These new rules apply to certain chemically formulated consumer products that contain VOCs, such as hair spray, insecticides, and cleaners, as well as portable fuel containers from which VOCs may be emitted. VOCs are a significant precursor to ozone formation.

The DEP adopted model OTC rules for solvent cleaning operations, car painting and refinishing operations, and gasoline pumping operations, and requires certain industry changes to prevent or decrease VOC emissions.

The DEP also adopted model OTC rules that establish standards for architectural coatings, such as paints, varnishes, stains and traffic coatings, for manufacturers, suppliers, distributors, retailers and persons who apply architectural coatings. The estimated statewide VOC emission reductions from implementing these rules are 25 tons per day by 2005.



*Pollutants from cars react in sunlight to form ground-level ozone.*



## Dangerous diesel emissions

*continued from front page*

function, lung cancer and heart disease. In fact, every year in New Jersey, diesel emissions cause hundreds of premature deaths and 13,000 emergency-room visits.

Children are especially vulnerable to the effects of soot; they breathe up to 50 percent more air per pound of body weight than adults do, and their immune and respiratory systems are still developing. In New Jersey, one in every 13 schoolchildren has asthma, which is a leading cause of school absenteeism.

To improve air quality and protect public health, New Jersey officials are working to reduce soot by 20 percent statewide during the next decade. The DEP's no-idling initiative is one of several strategies being implemented to achieve the state's diesel-reduction goal.

New Jersey law strictly prohibits diesel-powered vehicles such as trucks and buses from idling longer than three minutes in most instances. Eliminating idling, however, will better protect the public's health from dangerous diesel exhaust. School officials who sign the DEP's no-idling pledge are volunteering to implement best practices to reduce diesel emissions from school buses. These best practices include turning off engines while waiting to load and unload students, using the newest buses for longest routes, maintaining buses to eliminate any visible exhaust and completing bus driver training on eliminating idling.

This summer, the DEP distributed a statewide compliance alert to provide notice of its stepped-up efforts to enforce New Jersey's three-minute idling law. The DEP has targeted various types of diesel-powered vehicles that operate on the state's roadways, including public-transportation buses, long-haul trucks and short-haul delivery trucks.

Further, New Jersey lawmakers are considering a tough new law to curb diesel emissions. Introduced as S1759 by Sen. Bob Smith and as A3183 by Assemblyman Jack McKeon, the legislation would require diesel-powered vehicles to install more efficient exhaust-system technology as well as the sale of cleaner diesel fuel in New Jersey.

The legislation calls for diesel-powered on-road vehicles, such as buses, garbage trucks, delivery trucks and long-haul trucks, to be retrofitted with control devices, which



## Taking the pledge

*Piscataway School District Deputy Superintendent Harold Reid signs the no-idling pledge as Piscataway becomes the first New Jersey school district to commit voluntarily to eliminating idling by school buses while they are waiting to load and to unload students.*

are installed on the vehicles' exhaust systems to remove soot before it is released into the air. The use of retrofitted fleets of off-road diesel vehicles, such as bulldozers and other construction equipment, on all public road and construction projects would be mandated under another provision in the legislation.

In advance of the multifaceted retrofitting process, the legislation would strengthen an existing federal regulation calling for the use of ultra-low sulfur fuel by June 2006. While the U.S. Environmental Protection Agency is mandating the use of this cleaner fuel in only on-road diesel vehicles, New Jersey's legislation would extend the ultra-low sulfur fuel requirements to off-road vehicles as well.

Every year, in New Jersey, diesel emissions cause hundreds of premature deaths.

Sulfur in diesel fuel clogs existing particle filters and traps and renders these devices less efficient, allowing pollutants to be released. The use of ultra-low sulfur diesel alone has been shown in some studies to reduce emissions of particles by 10 percent to 20 percent. The combined use of retrofitted diesel-powered vehicles and ultra-low sulfur diesel fuel can significantly decrease the emission of particles.

To learn more about the DEP's initiative to reduce harmful diesel soot, visit [www.StopTheSoot.org](http://www.StopTheSoot.org)

# New Jersey tightening controls on toxic mercury emissions, pushing for tougher federal action

New Jersey is poised to formally adopt tough regulations that would require the state's coal-fired power plants, iron and steel melters and solid waste incinerators to reduce toxic mercury emissions by up to 95 percent within the next three to five years.

When implemented, New Jersey's regulations will reduce annual mercury emissions from in-state sources by 1,500 pounds.

Pregnant women, their unborn babies and young children are the most vulnerable to this highly toxic substance. Even exposure to low levels of mercury can irreversibly damage the brain and central nervous system in developing fetuses and infants.

If New Jersey's rules were enacted nationally, mercury emissions from coal-fired power plants alone would decline from 48 tons to about five tons.

Coal-fired power plants and other industrial combustion facilities are the chief sources of toxic mercury emissions. Airborne mercury drifts into the ocean, lakes and streams, where it accumulates in plants, fish and other animals in its most toxic form, methylmercury. Human exposure to methylmercury comes primarily from eating contaminated fish and shellfish. In New Jersey, the DEP and state health department officials issue advisories to guide the public on safe consumption of certain species of fish and crabs caught in state waters.

Earlier this year, EPA scientists announced research that nearly doubled previous estimates on the number of newborn children at risk for health problems from mercury exposure. These revised estimates, based on

research conducted by scientists at DEP and in Maine, indicate some 630,000 babies born in the U.S. this year could have unsafe mercury levels in their blood.

Governor James E. McGreevey proposed the stringent new mercury regulations in response to the federal government's move to dramatically weaken a Clinton-era plan to reduce airborne mercury by as much as 90 percent by requiring coal-fired power plants to install state-of-the-art pollution controls by late 2007.

The McGreevey Administration has repeatedly urged the federal government to follow New Jersey's lead in setting strict new limits on airborne mercury. In a letter to President Bush this past summer, the Governor cited the U.S. Environmental Protection Agency's 2002 Toxic Release Inventory, which reported a 10-percent rise in mercury emissions nationwide. Governor McGreevey said the report, which tracks the industrial use and release of chemicals, underscored the pressing need for more protective mercury-emissions standards.

"Reducing these harmful mercury emissions must be a national priority, and it requires action now," McGreevey wrote.

If New Jersey's rules were enacted nationally, mercury emissions from coal-fired power plants alone would decline from 48 tons to about five tons.



*Power plants are chief sources of mercury emissions.*

New Jersey Department of Environmental Protection  
Office of the Commissioner  
401 E. State St.  
P.O. Box 402  
Trenton, NJ 08625-0402

Visit us on the Web at: [www.nj.gov/dep](http://www.nj.gov/dep)

printed on recycled paper

**Call Our Toll-free 24-Hour Hotline 1-877-WARNDEP (1-877-927-6337) to Report an Environmental Incident Impacting New Jersey.**

## New rule proposal addresses global warming

Governor James E. McGreevey commemorated the 50<sup>th</sup> anniversary of New Jersey's Air Pollution Control Act by proposing new rules that redefine carbon dioxide as an air contaminant, clearing the way for New Jersey to participate in a regional greenhouse gas emissions reduction program.

Carbon dioxide is a greenhouse gas that helps trap the sun's heat in the atmosphere, contributing to a rise in the earth's average temperature.

Global warming is a serious threat to New Jersey, with projections forecasting average temperature increases between five and 10 degrees by 2100. Such a severe climate change could contribute to air quality problems by exacerbating smog and ozone during the summer.

New Jersey is especially vulnerable to sea level rise (due primarily to warming and melting of polar ice caps) and increases in extreme weather events, such as droughts, flooding and hurricanes. These consequences could have serious impacts on New Jersey's environment and coastal communities. There is strong scientific consensus that these impacts are inevitable if action is not taken to reduce greenhouse gas emissions.

Under the proposal announced by the Governor in September, the DEP would revise several air pollution control rules, bringing them in line with current scientific consensus that carbon dioxide is an air contaminant. The revision lays the groundwork for regional initiatives to reduce carbon dioxide.

The new rules would formally establish that carbon dioxide emissions are responsible for significant impacts on human health and the environment by contributing to global warming.

New Jersey is currently part of the nine-state Regional Greenhouse Gas Initiative that is working to reduce carbon dioxide emissions from power plants. Other participating states are Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New York, Rhode Island and Vermont. In addition, Pennsylvania, Maryland, the District of Columbia, the Eastern Canadian provinces and New Brunswick are participating as observers in the initiative.

To learn more about air pollution in New Jersey and what is being done about it, read "In Pursuit of Clean Air," which reviews state and federal policies affecting the Garden State's air quality. The report is available on the DEP Web site at [www.state.nj.us/dep/](http://www.state.nj.us/dep/)

